AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method for treating a spent ionic liquid composition comprising an ionic liquid composition and contaminants, the method comprising heating said spent ionic liquid composition under reduced pressure at or below 2 mmHg at a temperature in a range from 200°C to 300°C so as to form a partial decomposition product thereof, separating said partial decomposition product from said contaminants and ~~reacting~~ regenerating said ionic liquid composition from the separated partial decomposition product ~~with a reactant to regenerate said ionic liquid~~.

2. (Currently Amended) ~~A~~ The method according to claim 1 wherein said partial decomposition product is separated together with at least one other decomposition product from said contaminants.

3. (Currently Amended) ~~A~~ The method according to claim 2 ~~or claim 3~~ wherein said partial decomposition product is separated from the at least one other decomposition product by distillation.

4. (Currently Amended) ~~A~~ The method according to ~~any of the preceding claims~~ claim 3 wherein said partial decomposition product is reacted with said at least one

other decomposition ~~produced~~ product to regenerate said ionic liquid composition.

5. (Currently Amended) ~~A~~ The method according to ~~any of the preceding claims~~ claim 3 wherein said separation is effected by volatilisation during the heating process.

6. (Currently Amended) ~~A~~ The method according to ~~any preceding~~ claim 1 wherein the ionic liquid composition is 1-methyl-3-ethylimidazolium chloride.

7. (Currently Amended) ~~A~~ The method according to claim 6 wherein the partial decomposition product is a mixture of 1-methylimidizole, 1-ethylimidizole, chloromethane and chloroethane.

8. (Currently Amended) ~~A~~ The method according to claim 7 wherein 1-methylimidizole is reacted with chloroethane to regenerate 1-methyl-3-ethylimidazolium chloride.

9. (Currently Amended) ~~A~~ The method according to claim ~~5~~ 6 wherein the partial decomposition product is 1-ethylimidizole.

10. (Currently Amended) ~~A~~ The method according to claim 9 wherein 1-ethylimidizole is reacted with chloromethane to regenerate 1-methyl-3-ethylimidazolium chloride.

11. (Canceled)

12. (Canceled)

13. (Canceled)

14. (Currently Amended) ~~A~~ The method according to claim ~~13~~ 1 wherein the spent ionic liquid composition is heated to a temperature from 220 to 250°C.

15. (Currently Amended) ~~A~~ The method according to ~~any of claims 3 to 14~~ claim 5 wherein volatile products resulting from volatilisation of the spent ionic liquid composition are collected in a cold trap in a system.

16. (Currently Amended) ~~A~~ The method according to ~~any preceding~~ claim 15, wherein one of said volatile products is hydrogen chloride which is produced by heating said spent ionic liquid composition and is scrubbed from the system using a hydroxide scrubber.

17. (Currently Amended) ~~A~~ The method according to ~~any preceding~~ claim 7, wherein hydrogen chloride and/or ethene is produced by heating said spent ionic liquid composition.

18. (Currently Amended) ~~A~~ The method according to claim 17 wherein said ethene is bottled or burnt as a by product.

19. (Currently Amended) A process for ~~the~~ reprocessing ~~of~~ nuclear fuel and ~~the treatment of~~ treating salt wastes contaminated with fission products thereby forming a fission product contaminant residue, the process

including a method ~~of any preceding claim~~ for treating a spent ionic liquid composition according to claim 1.

20. (Currently Amended) ~~A~~ The process according to claim 19 wherein the fission product contaminant residue is separated and calcined before disposal.

21. (Currently Amended) ~~A~~ The process according to claim 19 wherein the fission product contaminant residue is reacted with boric acid before disposal.